

## ABSTRACT

A new computer based method is provided for the evaluation of dielectric film properties. These properties are for a given dielectric derived from measurements of the chemical bonding of that dielectric. Previously collected reference data are maintained in a reference data base from where data are extracted and used as input to mathematical modeling software that predicts thin film properties. The output of these prediction algorithms is used, together with chemical bonding measurements of the dielectric that is being investigated, as input to a program that computes the dielectric properties of the dielectric.